

REMARKS

Entry of the foregoing amendment is respectfully requested. Claims 1-68 are pending. Claims 1-21, 31-42, 44-52 and 54-55 are withdrawn from consideration.

In an Office Action mailed December 15, 2005, the Examiner has: 1) rejected claims 22-30, 43, and 53 under 35 U.S.C. 103(a) as being unpatentable over Gutmann et al. in view of Zenhausern et al., and rejected claims 22 and 53 under 35 U.S.C. 103(a) as being unpatentable over Amar et al. in view of Zenhausern et al.

In response to the Office Action mailed December 15, 2005, Applicants have amended claims 22, 23, and 53, and added new claims 56-68.

Independent claims 22 and 53 have been amended to include the limitation that a measurement of the resonant frequency shift of the probe is made, the resonant frequency shift resulting from the interaction between the sample and an evanescent electromagnetic field emitted from the probe. Neither the Gutmann et al., Zenhausern et al., nor Amar et al. references (either separately or in combination) teach a method of measuring electrical impedance where the method includes measuring a resonant frequency shift of the probe. Thus claim 22 and 53 are believed to be in condition for allowance. Since claims 23-30, and 43 depend from either directly or indirectly from claim 22, claims 23-30 and 43 are believed to be in condition for allowance as well.

New claims 56-66 are directed to a method for measuring electrical impedance of a sample using a microwave cavity probe having a tip, also including the limitation of measuring a quality factor shift of the probe, wherein the quality factor shift results from the interaction between the sample and an evanescent electromagnetic field emitted from the probe. Neither the Gutmann et al., Zenhausern et al., nor Amar et al. references (either separately or in combination) teach a method of measuring electrical impedance where the method includes measuring a quality factor shift of the probe. Thus, claims 56-66 are believed to be in condition for allowance.

New claims 67 and 68 are dependent from independent claims 22 and 56, respectively, and thus are believed to be in condition for allowance as well. Furthermore, neither the Gutmann et al., Zenhausern et al., nor Amar et al. references (either separately or in combination) teach making a measurement of electrical impedance under quasistatic approximation conditions.

No new matter is introduced by the submitted amendments. Support for measuring electrical impedance and/or other electrical properties through measurements of changes in resonant frequency and/or quality factor may be found in the specification, among other places, at page 3, line 28 to page 4, line 24. Support for using the quasistatic approximation model may be found in the specification, among other places, at page 13, line 5 to page 14, line 34, as well as in FIG. 3.

CONCLUSIONS

Claims 1-68 are pending. Claims 1-21, 31-42, 44-52 and 54-55 have been withdrawn from consideration.

Amended claims 22 and 53 are believed to be in condition for allowance. Since claims 23-30, and 43 depend either directly or indirectly from claim 22, claims 23-30 and 43 are believed to be in condition for allowance as well.

New claims 56-68 are believed to be in condition for allowance as well.

Should any questions arise in connection with this application, the undersigned respectfully requests that he be contacted at the number indicated below.

Respectfully submitted,

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Date: June 15, 2006

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